



ELSEVIER

Journal of Photochemistry and Photobiology A: Chemistry 153 (2002) 257–260

Journal of  
Photochemistry  
and  
Photobiology  
A: Chemistry

www.elsevier.com/locate/jphotochem

## Subject Index of Volume 153

### Alkylbenzopyridoporphyrazine

Photosensitizer efficacy of non-peripheral substituted alkylbenzopyridoporphyrazines for photodynamic therapy of cancer, 245

### Amino acid

Influence of methanol and cyclodextrin cavity size on stoichiometry and binding constant of 3-[2-(9-anthryl)benzoxazol-5-yl]-alanine, 121

### Aminoalcohol

Use of 2-(*N*-methyl-*N*-phenylamino)-1-phenylethanol as synergist in UV-curing applications, 129

### Anthracene

Photoreactions in clay media: singlet oxygen oxidation of electron-rich substrates mediated by clay-bound dyes, 205

### Antioxidant

The photochemistry of dipyridamole, 237

### Arylsulfonamides

Photolysis of *N*-(4-benzoyl)benzenesulfonyl]benzenesulfonamide, 109

### Bactericidal activity

Bactericidal and photocatalytic activities of TiO<sub>2</sub> thin films prepared by sol-gel and reverse micelle methods, 211

### Benzochromone

Fluorescence emission and photooxidation studies with 5,6- and 6,7-benzocoumarins and a 5,6-benzochromone under direct and concentrated sun light, 173

### Benzocoumarin

Fluorescence emission and photooxidation studies with 5,6- and 6,7-benzocoumarins and a 5,6-benzochromone under direct and concentrated sun light, 173

### Benzophenone

Potentialities of diffuse reflectance laser-induced techniques in solid phase: A comparative study of benzophenone inclusion within *p*-*tert*-butylcalixarenes, silicalite and microcrystalline cellulose, 11

### Biodegradability

Biodegradability enhancement of textile dyes and textile wastewater by VUV photolysis, 191

### Calixarenes

Potentialities of diffuse reflectance laser-induced techniques in solid phase: A comparative study of benzophenone inclusion within *p*-*tert*-butylcalixarenes, silicalite and microcrystalline cellulose, 11

### Carbendazim

Photochemical behavior of the fungicide carbendazim in dilute aqueous solution, 221

### CIDNP

Electron transfer mediated geometrical photoisomerization of  $\alpha,\beta$ -unsaturated ketones in the presence of electron donors in solution, 77

The role of radicals in the phototransformations of  $\beta$ -ionone in the presence of electron donors in solution, 113

### Clay microenvironment

Photoreactions in clay media: singlet oxygen oxidation of electron-rich substrates mediated by clay-bound dyes, 205

### Concentrated sulfuric acid

Photochemistry of concentrated sulfuric acid in the presence of SO<sub>2</sub> and Fe(II), and implications for the cloud chemistry of Venus, 1

### Coumarin

A pulse radiolysis study of coumarin and its derivatives, 163

### Cure monitoring

New fluorescent probes for monitoring the polymerization reaction: *p*-vinyliden derivatives of *N,N*-dimethylaminoaryl compounds, 135

### Cyclodextrin

Influence of methanol and cyclodextrin cavity size on stoichiometry and binding constant of 3-[2-(9-anthryl)benzoxazol-5-yl]-alanine, 121

### Dichlorovos

Photo-oxidative degradation of insecticide dichlorovos by a combined semiconductors and organic sensitizers in aqueous media, 229

### Diffuse reflectance

Potentialities of diffuse reflectance laser-induced techniques in solid phase: A comparative study of benzophenone inclusion within *p*-*tert*-butylcalixarenes, silicalite and microcrystalline cellulose, 11

### 2,3-Dihydroxypyridine

Ionization effects on the sensitized photooxidation of 2,3-dihydroxypyridine and 2,4-dihydroxypyridine: a kinetic study, 101

### 2,4-Dihydroxypyridine

Ionization effects on the sensitized photooxidation of 2,3-dihydroxypyridine and 2,4-dihydroxypyridine: a kinetic study, 101

### Dipole moments

Dipole moments of 4'-aminoflavonols determined using electro-optical absorption measurements or molecular Stark-effect spectroscopy, 19

### Dipyridamole

The photochemistry of dipyridamole, 237

### Dye sensitisers

Photoreactions in clay media: singlet oxygen oxidation of electron-rich substrates mediated by clay-bound dyes, 205

### Dye sensitization

Visible light induced photodegradation of organic pollutants on dye adsorbed TiO<sub>2</sub> surface, 199

### Dye-mixture

Energy transfer in Rh 6G:Rh B system in PMMA matrix under cw laser excitation, 145

### Dyes

Environmental remediation by an integrated microwave/UV-illumination method. II. Characteristics of a novel UV-VIS-microwave integrated irradiation device in photodegradation processes, 185

Biodegradability enhancement of textile dyes and textile wastewater by VUV photolysis, 191

### *E. coli*

Bactericidal and photocatalytic activities of TiO<sub>2</sub> thin films prepared by sol-gel and reverse micelle methods, 211

### Electron transfer

Direct and sensitized (energy and electron transfer) geometric isomerization of stilbene within zeolites: a comparison between solution and zeolite as reaction media, 41



- Electron transfer mediated geometrical photoisomerization of  $\alpha,\beta$ -unsaturated ketones in the presence of electron donors in solution, 77
- Electron-rich phenols  
Photoreactions in clay media: singlet oxygen oxidation of electron-rich substrates mediated by clay-bound dyes, 205
- Electro-optical absorption method  
Dipole moments of 4'-aminoflavonols determined using electro-optical absorption measurements or molecular Stark-effect spectroscopy, 19
- Energy transfer  
Energy transfer in Rh 6G:Rh B system in PMMA matrix under cw laser excitation, 145
- Excited state  
Investigation of excited-state proton transfer in 2-naphthol derivatives containing a carboxyl group in organic solvents and in methanol-water mixtures, 89
- Flash photolysis  
Potentialities of diffuse reflectance laser-induced techniques in solid phase: A comparative study of benzophenone inclusion within *p*-*tert*-butylcalixarenes, silicalite and microcrystalline cellulose, 11
- Flavonols  
Dipole moments of 4'-aminoflavonols determined using electro-optical absorption measurements or molecular Stark-effect spectroscopy, 19
- Fluorescence  
Photophysical properties of novel [1,2,3]triazolo[4,5-d] pyridazine derivatives, 83
- Fluorescence lifetime  
Fluorescence emission and photooxidation studies with 5,6- and 6,7-benzocoumarins and a 5,6-benzochromone under direct and concentrated sun light, 173
- Fluorescent probes  
Dipole moments of 4'-aminoflavonols determined using electro-optical absorption measurements or molecular Stark-effect spectroscopy, 19  
New fluorescent probes for monitoring the polymerization reaction: *p*-vinyliden derivatives of *N,N*-dimethylaminoaryl compounds, 135
- Free radicals  
Kinetic and spectral properties of rhodamine 6G free radicals: a pulse radiolysis study, 153
- Fungicide  
Photochemical behavior of the fungicide carbendazim in dilute aqueous solution, 221
- Geometric isomerization  
Direct and sensitized (energy and electron transfer) geometric isomerization of stilbene within zeolites: a comparison between solution and zeolite as reaction media, 41
- Halocarbons  
Visible light induced photodegradation of organic pollutants on dye adsorbed TiO<sub>2</sub> surface, 199
- Hydrogen bonding  
Photophysical properties of novel [1,2,3]triazolo[4,5-d] pyridazine derivatives, 83
- Inclusion complexes  
Potentialities of diffuse reflectance laser-induced techniques in solid phase: A comparative study of benzophenone inclusion within *p*-*tert*-butylcalixarenes, silicalite and microcrystalline cellulose, 11
- Internal conversion  
Photophysical properties of novel [1,2,3]triazolo[4,5-d] pyridazine derivatives, 83
- Intersystem crossing  
Photophysical properties of novel [1,2,3]triazolo[4,5-d] pyridazine derivatives, 83
- $\beta$ -Ionone  
The role of radicals in the phototransformations of  $\beta$ -ionone in the presence of electron donors in solution, 113
- Isomerization  
Electron transfer mediated geometrical photoisomerization of  $\alpha,\beta$ -unsaturated ketones in the presence of electron donors in solution, 77  
The role of radicals in the phototransformations of  $\beta$ -ionone in the presence of electron donors in solution, 113
- Kinetics  
Kinetics of thermal decoloration of a photomerocyanine in mixtures of protic and nonpolar solvents, 25  
A pulse radiolysis study of coumarin and its derivatives, 163
- Laser flash photolysis  
Laser flash photolysis study of nicotinic acid in water, 33  
Photosensitizer efficacy of non-peripheral substituted alkylbenzopyridoporphyrazines for photodynamic therapy of cancer, 245
- Lasers  
Kinetic and spectral properties of rhodamine 6G free radicals: a pulse radiolysis study, 153
- Methanol  
Influence of methanol and cyclodextrin cavity size on stoichiometry and binding constant of 3-[2-(9-anthryl)benzoxazol-5-yl]-alanine, 121
- Methylene blue  
Visible light induced photodegradation of organic pollutants on dye adsorbed TiO<sub>2</sub> surface, 199
- Microcrystalline cellulose  
Potentialities of diffuse reflectance laser-induced techniques in solid phase: A comparative study of benzophenone inclusion within *p*-*tert*-butylcalixarenes, silicalite and microcrystalline cellulose, 11
- Micropolarity  
New fluorescent probes for monitoring the polymerization reaction: *p*-vinyliden derivatives of *N,N*-dimethylaminoaryl compounds, 135
- Microviscosity  
New fluorescent probes for monitoring the polymerization reaction: *p*-vinyliden derivatives of *N,N*-dimethylaminoaryl compounds, 135
- Microwave  
Environmental remediation by an integrated microwave/UV-illumination method. II. Characteristics of a novel UV-VIS-microwave integrated irradiation device in photodegradation processes, 185
- Microwave plasma  
Environmental remediation by an integrated microwave/UV-illumination method. II. Characteristics of a novel UV-VIS-microwave integrated irradiation device in photodegradation processes, 185
- Naphthol  
Investigation of excited-state proton transfer in 2-naphthol derivatives containing a carboxyl group in organic solvents and in methanol-water mixtures, 89
- Olefins  
Cation controlled singlet oxygen mediated oxidation of olefins within zeolites, 55
- Oxidation  
Cation controlled singlet oxygen mediated oxidation of olefins within zeolites, 55
- Photochemical transformation  
Photochemical behavior of the fungicide carbendazim in dilute aqueous solution, 221
- Photochemistry  
Photochemistry of concentrated sulfuric acid in the presence of SO<sub>2</sub> and Fe(II), and implications for the cloud chemistry of Venus, 1



## Photodegradation

- Environmental remediation by an integrated microwave/UV-illumination method. II. Characteristics of a novel UV-VIS-microwave integrated irradiation device in photodegradation processes, 185

## Photo-degradation

- Biodegradability enhancement of textile dyes and textile wastewater by VUV photolysis, 191

## Photodegradation

- Visible light induced photodegradation of organic pollutants on dye adsorbed TiO<sub>2</sub> surface, 199
- The photochemistry of dipyridamole, 237

## Photodynamic therapy of cancer

- Photosensitizer efficacy of non-peripheral substituted alkylbenzopyridoporphyrazines for photodynamic therapy of cancer, 245

## Photoinitiators

- Use of 2-(*N*-methyl-*N*-phenylamino)-1-phenylethanol as synergist in UV-curing applications, 129

## Photoionisation

- Laser flash photolysis study of nicotinic acid in water, 33

## Photolysis

- Photolysis of *N*-[(4-benzoyl)benzenesulfonyl]benzenesulfonamide, 109

## Photomerocyanine

- Kinetics of thermal decoloration of a photomerocyanine in mixtures of protic and nonpolar solvents, 25

## Photooxidation

- Ionization effects on the sensitized photooxidation of 2,3-dihydroxypyridine and 2,4-dihydroxypyridine: a kinetic study, 101
- Fluorescence emission and photooxidation studies with 5,6- and 6,7-benzocoumarins and a 5,6-benzochromone under direct and concentrated sun light, 173
- Environmental remediation by an integrated microwave/UV-illumination method. II. Characteristics of a novel UV-VIS-microwave integrated irradiation device in photodegradation processes, 185
- Photoreactions in clay media: singlet oxygen oxidation of electron-rich substrates mediated by clay-bound dyes, 205

## Photopolymerization

- New fluorescent probes for monitoring the polymerization reaction: *p*-vinyliden derivatives of *N,N*-dimethylaminoaryl compounds, 135

## Photosensitization

- Ionization effects on the sensitized photooxidation of 2,3-dihydroxypyridine and 2,4-dihydroxypyridine: a kinetic study, 101

## Phototransformation

- The role of radicals in the phototransformations of  $\beta$ -ionone in the presence of electron donors in solution, 113

## Poly methyl methacrylate

- Energy transfer in Rh 6G:Rh B system in PMMA matrix under cw laser excitation, 145

## Poly(vinyl alcohol) coating

- Photosensitizer efficacy of non-peripheral substituted alkylbenzopyridoporphyrazines for photodynamic therapy of cancer, 245

## Protic solvents

- Ground and excited state proton transfer reaction of two new *o*-hydroxy Schiff bases in some protic solvents at room temperature and 77 K, 67

## Proton transfer

- Ground and excited state proton transfer reaction of two new *o*-hydroxy Schiff bases in some protic solvents at room temperature and 77 K, 67
- Investigation of excited-state proton transfer in 2-naphthol derivatives containing a carboxyl group in organic solvents and in methanol-water mixtures, 89

## Pulse radiolysis

- Kinetic and spectral properties of rhodamine 6G free radicals: a pulse radiolysis study, 153
- A pulse radiolysis study of coumarin and its derivatives, 163

## Pyridine-3-carboxylic acid

- Laser flash photolysis study of nicotinic acid in water, 33

## Quenching of fluorescence emission

- Fluorescence emission and photooxidation studies with 5,6- and 6,7-benzocoumarins and a 5,6-benzochromone under direct and concentrated sun light, 173

## Radicals

- The role of radicals in the phototransformations of  $\beta$ -ionone in the presence of electron donors in solution, 113

## Reverse micelle method

- Bactericidal and photocatalytic activities of TiO<sub>2</sub> thin films prepared by sol-gel and reverse micelle methods, 211

## Rhodamine B

- Visible light induced photodegradation of organic pollutants on dye adsorbed TiO<sub>2</sub> surface, 199
- Bactericidal and photocatalytic activities of TiO<sub>2</sub> thin films prepared by sol-gel and reverse micelle methods, 211

## Rhodamine 6G

- Kinetic and spectral properties of rhodamine 6G free radicals: a pulse radiolysis study, 153

## Rhodamine-B

- Environmental remediation by an integrated microwave/UV-illumination method. II. Characteristics of a novel UV-VIS-microwave integrated irradiation device in photodegradation processes, 185

## Room temperature phosphorescence

- Potentialities of diffuse reflectance laser-induced techniques in solid phase: A comparative study of benzophenone inclusion within *p*-*tert*-butylcalixarenes, silicalite and microcrystalline cellulose, 11

## Rose Bengal

- Ionization effects on the sensitized photooxidation of 2,3-dihydroxypyridine and 2,4-dihydroxypyridine: a kinetic study, 101

## Schiff bases

- Ground and excited state proton transfer reaction of two new *o*-hydroxy Schiff bases in some protic solvents at room temperature and 77 K, 67

## Semiconductors

- Photo-oxidative degradation of insecticide dichlorovos by a combined semiconductors and organic sensitizers in aqueous media, 229

## Sensitizers

- Photo-oxidative degradation of insecticide dichlorovos by a combined semiconductors and organic sensitizers in aqueous media, 229

## Silicalite

- Potentialities of diffuse reflectance laser-induced techniques in solid phase: A comparative study of benzophenone inclusion within *p*-*tert*-butylcalixarenes, silicalite and microcrystalline cellulose, 11

## Singlet molecular oxygen

- Ionization effects on the sensitized photooxidation of 2,3-dihydroxypyridine and 2,4-dihydroxypyridine: a kinetic study, 101

## Singlet oxygen

- The photochemistry of dipyridamole, 237

## Sol-gel method

- Bactericidal and photocatalytic activities of TiO<sub>2</sub> thin films prepared by sol-gel and reverse micelle methods, 211

## Steady-state irradiation

- Laser flash photolysis study of nicotinic acid in water, 33

## Stilbene

- Direct and sensitized (energy and electron transfer) geometric isomerization of stilbene within zeolites: a comparison between solution and zeolite as reaction media, 41

## Superoxide radical

- The photochemistry of dipyridamole, 237



## Surfactants

- Visible light induced photodegradation of organic pollutants on dye adsorbed TiO<sub>2</sub> surface, 199

## Synergist

- Use of 2-(*N*-methyl-*N*-phenylamino)-1-phenylethanol as synergist in UV-curing applications, 129

 $\alpha$ -Terpinene

- Fluorescence emission and photooxidation studies with 5,6- and 6,7-benzocoumarins and a 5,6-benzochromone under direct and concentrated sun light, 173

## Textile wastewater

- Biodegradability enhancement of textile dyes and textile wastewater by VUV photolysis, 191

## Thermal decoloration

- Kinetics of thermal decoloration of a photomerocyanine in mixtures of protic and nonpolar solvents, 25

TiO<sub>2</sub> semiconductor

- Visible light induced photodegradation of organic pollutants on dye adsorbed TiO<sub>2</sub> surface, 199

TiO<sub>2</sub> thin films

- Bactericidal and photocatalytic activities of TiO<sub>2</sub> thin films prepared by sol-gel and reverse micelle methods, 211

## Titanium dioxide

- Environmental remediation by an integrated microwave/UV-illumination method. II. Characteristics of a novel UV-VIS-microwave integrated irradiation device in photodegradation processes, 185

## Transient absorption spectra

- A pulse radiolysis study of coumarin and its derivatives, 163

## Triplet

- Laser flash photolysis study of nicotinic acid in water, 33

## Triplet state

- The role of radicals in the phototransformations of  $\beta$ -ionone in the presence of electron donors in solution, 113

## Unsaturated ketones

- Electron transfer mediated geometrical photoisomerization of  $\alpha,\beta$ -unsaturated ketones in the presence of electron donors in solution, 77

## UV

- Photochemical behavior of the fungicide carbendazim in dilute aqueous solution, 221

## UV-curing

- Use of 2-(*N*-methyl-*N*-phenylamino)-1-phenylethanol as synergist in UV-curing applications, 129

## Venus

- Photochemistry of concentrated sulfuric acid in the presence of SO<sub>2</sub> and Fe(II), and implications for the cloud chemistry of Venus, 1

## Visible light

- Visible light induced photodegradation of organic pollutants on dye adsorbed TiO<sub>2</sub> surface, 199

## VUV photolysis

- Biodegradability enhancement of textile dyes and textile wastewater by VUV photolysis, 191

## Zeolites

- Cation controlled singlet oxygen mediated oxidation of olefins within zeolites, 55

## Zinc phthalocyanine derivatives

- Photosensitizer efficacy of non-peripheral substituted alkylbenzopyridoporphyrazines for photodynamic therapy of cancer, 245



Digitized by the Internet Archive  
in 2023 with funding from  
Kahle/Austin Foundation



# Guide for Authors

## Submission of Papers

Authors are requested to submit their manuscripts to

### Editor-in-Chief: Professor R.P. Wayne

Physical and Theoretical Chemistry Laboratory  
South Parks Road  
Oxford OX1 3QZ  
UK

FAX: +44 (1865) 275410

E-MAIL: [jphoto@physchem.ox.ac.uk](mailto:jphoto@physchem.ox.ac.uk)

Authors in the USA and Canada may submit their manuscripts to the North American Editor:

### Professor R. Schmehl

Department of Chemistry  
Tulane University  
New Orleans, LA 70118  
USA

FAX: +1-504-865-5596

E-MAIL: [russ@tulane.edu](mailto:russ@tulane.edu)

Authors in Asia should submit their manuscripts to the Asian Editor:

### Professor H. Masuhara

Faculty of Engineering  
Department of Applied Physics  
Osaka University  
Yamadaoka 2-1  
Suita, Osaka 565-0871  
Japan

FAX: +81 6 6876 8580

E-MAIL: [masuhara@ap.eng.osaka-u.ac.jp](mailto:masuhara@ap.eng.osaka-u.ac.jp)

The full postal address, fax and telephone numbers, and e-mail address of the corresponding author must be given on the first (title) page of the manuscript.

Contributions are accepted on the understanding that authors have obtained the necessary authority for publication. Submission of an article is understood to imply that the article is original and unpublished and is not being considered for publication elsewhere. Upon acceptance of an article by the journal, the author(s) will be asked to transfer the copyright of the article to the publisher. This transfer will ensure the widest possible dissemination of information.

## Language

Papers will be published in English.

Authors in Japan please note that information about how to have the English of your paper checked, corrected and improved (*before submission*) is available from: Elsevier Science Japan, Editorial Service, 1-9-15 Higashi Azabu, Minato-ku, Tokyo 106-0044, Japan; Tel.: +81-3-5561-5032; Fax: +81-3-5561-5045; E-mail: [info@elsevier.co.jp](mailto:info@elsevier.co.jp)

## Manuscript Preparation

Three copies of the manuscript should be submitted, in double-spaced typing on pages of uniform size with a wide margin on the left. Some flexibility of presentation will be allowed but authors are urged to arrange the subject matter clearly under headings such as Introduction, Experimental details, Results, Discussion, etc. References should be numbered consecutively (numerals in square brackets) throughout the text and collected together in a reference list at the end of the paper. Journal titles should be abbreviated according to the Chemical Abstracts Service Source Index, 1970 edition, and supplements. The abbreviated title should be followed by volume number, year (in parentheses) and page number. Authors are reminded that delays in publication may occur if the instructions for submission and disk and manuscript preparation are not strictly followed. Authors are strongly recommended to submit disks to aid rapid processing. To facilitate communication, authors are requested to provide their current e-mail address, phone and fax number.

## Illustrations

Line drawings and cyclic or aromatic formulae should be in a form suitable for reproduction, drawn in Indian ink on drawing paper. They should preferably all require the same degree of reduction, and should be submitted on paper of the same size as, or smaller than, the main text to prevent damage in transit. Photographs should be submitted as clear black-and-white prints on glossy paper. Each illustration must be clearly numbered. "Quantity calculus" notation should be used for the labelling of the graph axes. Legends to the illustrations must be submitted in a separate list. All tables and illustrations should be numbered consecutively and separately throughout the paper.

## Offprints

Fifty offprints are provided free of charge to the corresponding author. Extra offprints can be ordered at prices shown on the offprint order form.

## Further Information

When the article has been accepted for publication and is in production, contact Elsevier Science at: [authorsupport@elsevier.ie](mailto:authorsupport@elsevier.ie) for author information: manuscript status may also be tracked using Elsevier's Author Gateway (<http://authors.elsevier.com>). Authors can also keep a track on the progress of their accepted article, and set up email alerts informing them of changes to their manuscript's status, by using the "Track a Paper" feature of Elsevier's Author Gateway (<http://authors.elsevier.com>).



# Authors did you know...

■ Your article published with Elsevier Science is also included in ScienceDirect, the world's largest scientific network, reaching over 9 million scientists and researchers at [www.sciencedirect.com](http://www.sciencedirect.com).

■ If your institute or organisation currently subscribes to ScienceDirect, you now have access to the full text of those journals in your subscription package at your desktop.

■ ScienceDirect allows you to keep track of citations to your article via e-mail. You can set up a personal profile to ensure you are kept up-to-date with publications in your specialist areas of research.

■ The publication of your article is announced in advance to thousands of registrants to our FREE e-mail alerting service **ContentsDirect**.

Find out more by accessing

[www.elsevier.com/locate/contentsdirect](http://www.elsevier.com/locate/contentsdirect)

■ Your article will be available in the ScienceDirect electronic archive and as such accessible to the millions of scientists visiting our database for an unlimited period of time.

ScienceDirect provides the articles **you** need for **your** research – [www.sciencedirect.com](http://www.sciencedirect.com)



To find out more about publishing your article with Elsevier Science, access [www.elsevier.com/homepage/authors](http://www.elsevier.com/homepage/authors)



1010-6030(20021101)153:1-3;1-4